

IN THE CLAIMS

1. (Canceled)

2. (Currently Amended) ~~A method according to claim 1,~~
form sheet type determining method comprising the steps of:
extracting each character string on an input form sheet
as a keyword, after performing character recognition on the
each character string; and
collating the extracted keywords with a plurality of sets
of keywords registered beforehand for each predetermined form
sheet as one set of keywords in a keyword register, thereby to
determine the type of said input form sheet,
wherein each keyword in each set of keywords registered
beforehand is registered in said keyword register in
association with a predetermined corresponding weight, and
wherein in said step of collating, each of said extracted
keywords of said input form sheet is given a weight; the
degree of matching between said input form sheet and said
predetermined form sheet types is evaluated for each
predetermined form sheet type by using said weights of said
extracted keywords and said predetermined weights of the
keywords in each set of said form sheet types within said

keyword register; and one of said predetermined form sheet types having the highest degree of matching is determined to be the type of the input form sheet.

²
~~3.~~ (Original) A method according to claim ¹~~2~~, wherein said predetermined weight of each keyword of said sets of keywords registered beforehand is a keyword-specific weight.

A1 ³
~~4.~~ (Currently Amended) A method according to claim ¹~~2~~, wherein the weights attached to each of said extracted keywords of said input form sheet ~~includes~~ include at least a weight based on the type of characters forming the keyword and a weight based on the location of the keyword on said input form sheet.

5. (Canceled)

⁴
~~6.~~ (Currently Amended) ~~A method according to claim 5,~~
form sheet type determining method for determining to which of
predetermined form sheet types an input form sheet
corresponds, comprising the steps of:

registering a plurality of sets of keywords beforehand in a keyword register with one set of keywords for each of predetermined form sheet types;

reading image data of an input form sheet, extracting character strings from the read image data, and performing character recognition on each of the extracted character strings;

extracting each of said character-recognized character strings as a keyword;

AI collating said extracted keywords, for each of the form sheet types, with said plurality of sets of keywords registered in said register, thereby to determine the type of said input form sheet,

wherein in said keyword register, said each keyword in said sets of keywords is registered in association with a predetermined corresponding weight, and

wherein in said step of collating, each of said extracted keywords of said input form sheet is attached with a weight; the degree of matching between said input form sheet and said predetermined form sheet types is evaluated for each predetermined form sheet type by using said weights of said extracted keywords and said predetermined weights of the keywords in each set of said form sheet types within said

keyword register; and one of said predetermined form sheet types having the highest degree of matching is determined to be the type of the input form sheet.

⁵
~~7~~. (Original) A method according to claim ⁴~~6~~, wherein the weight attached to each of said extracted keywords of said input form sheet is a weight based on the type of characters forming the keyword.

A1 ⁶
~~8~~. (Original) A method according to claim ⁴~~6~~, wherein the weight attached to each of said extracted keywords of said input form sheet is a weight based on the location on said input form sheet.

⁸
~~9~~. (Original) A method according to claim ⁴~~6~~, wherein said predetermined weight of each keyword of said registered set of keywords is a keyword-specific weight.

⁷
~~10~~. (Original) A method according to claim ⁶~~8~~, wherein the weight attached to each of said extracted keywords of said input form sheet based on the location on said form sheet, is given a larger weight as the location of the keyword on the input form sheet approaches closer to the uppermost location.

⁹
~~11.~~ (Original) A method according to claim ⁴~~8~~, wherein the weights attached to each of said extracted keywords of said input form sheet include a weight based on the type of characters forming the keyword and a weight based on the location of the keyword on said input form sheet.

[Claims 12-15 (Canceled)

¹⁰
~~16.~~ (Currently Amended) ~~An apparatus according to claim 15,~~ A form sheet type determining apparatus for determining to which of predetermined form sheet types an input form sheet corresponds, comprising:

a keyword register which stores therein a plurality of sets of keywords, one set for each of predetermined form sheet types;

a character recognition unit which reads image data of an input form sheet, extracts character strings from the read image data, and performs character recognition on each character string extracted;

a keyword extraction unit which extracts as a keyword each of the character strings character-recognized by the character recognition unit;

a collator which collates said extracted keywords, for each predetermined form sheet type, with each set of keywords of said plurality of sets of keywords registered in said keyword register to thereby determine the type of said input form sheet,

wherein in said collator each of said extracted keywords is given a weight based on a type of characters constituting the extracted ~~further~~ keyword.

A1 ¹¹
~~17~~ ¹⁰ 16. (Currently Amended) An apparatus according to claim 16, wherein said type of characters distinguishes whether each of said extracted keywords is typed ~~one or handwritten one~~.

¹²
~~18~~ 18. (Currently Amended) ~~An apparatus according to claim 15~~ A form sheet type determining apparatus for determining to which of predetermined form sheet types an input form sheet corresponds, comprising:

a keyword register which stores therein a plurality of sets of keywords one set for each of predetermined form sheet types;

a character recognition unit which reads image data of an input form sheet, extracts character strings from the read image data, and performs character recognition on each

character string extracted;

a keyword extraction unit which extracts as a keyword each of the character strings character-recognized by the character recognition unit;

a collator which collates said extracted keywords, for each predetermined form sheet type, with each set of keywords of said plurality of sets of keywords registered in said keyword register to thereby determine the type of said input form sheet,

wherein in said collator each of said extracted keywords is given a weight in accordance with a location of the keyword on said input form sheet.

13

~~10.~~ (Currently Amended) ~~An apparatus according to claim~~
15 A form sheet type determining apparatus for determining to which of predetermined form sheet types an input form sheet corresponds, comprising:

a keyword register which stores therein a plurality of sets of keywords one set for each of predetermined form sheet types;

a character recognition unit which reads image data of an input form sheet, extracts character strings from the read image data, and performs character recognition on each

character string extracted;

a keyword extraction unit which extracts as a keyword each of the character strings character-recognized by the character recognition unit;

a collator which collates said extracted keywords, for each predetermined form sheet type, with each set of keywords of said plurality of sets of keywords registered in said keyword register to thereby determine the type of said input form sheet,

wherein in said register each keyword in each set of keywords is registered in association with a corresponding keyword-specific weight for each ~~of~~ form sheet ~~types~~ type.

14
20. (Currently Amended) ~~An apparatus according to claim~~
15 A form sheet type determining apparatus for determining to which of predetermined form sheet types an input form sheet corresponds, comprising:

a keyword register which stores therein a plurality of sets of keywords one set for each of predetermined form sheet types;

a character recognition unit which reads image data of an input form sheet, extracts character strings from the read image data, and performs character recognition on each

character string extracted;

_____ a keyword extraction unit which extracts as a keyword each of the character strings character-recognized by the character recognition unit;

_____ a collator which collates said extracted keywords, for each predetermined form sheet type, with each set of keywords of said plurality of sets of keywords registered in said keyword register to thereby determine the type of said input form sheet,

Q1 wherein in said register each keyword in each set of keywords is registered in association with a predetermined weight, and

wherein in said collator, each of said extracted keywords is attached with a weight, and said collator evaluates, for each form sheet type, the degree of matching between said input form sheet and said predetermined form sheet types by using said weights of said extracted keywords and said predetermined weight of each keyword in each set of said keywords within said keyword register to thereby decide that a form sheet type having a highest degree of matching is the form sheet type of said input form sheet.

¹⁵
~~21~~. (Original) An apparatus according to claim ¹⁴~~20~~,
wherein the weight given to each of said extracted keywords is
a weight based on a type of characters constituting the
keyword.

¹⁶
¹⁵~~21~~. (Currently Amended) An apparatus according to claim
~~21~~, wherein said type of characters distinguishes whether each
said extracted keywords is typed ~~one~~ or handwritten ~~one~~.

¹⁹
~~23~~. (Original) An apparatus according to claim ¹⁴~~20~~,
wherein the weight given to each of said extracted keywords is
a weight based on a location of the keyword on said input form
sheet.

²⁰
~~24~~. (Original) An apparatus according to claim ¹⁴~~20~~,
wherein said predetermined weight of each keyword in each set
of keywords registered in said register is a keyword-specific
weight.

¹⁷
~~25~~. (Original) An apparatus according to claim ¹⁶~~22~~,
wherein each of said extracted keywords is given a weight
larger than 0 when the keyword is typed, and given a weight of
0 when the keyword is handwritten, such that among said

extracted keywords of said input form sheet, one or more handwritten keywords are eliminated from the determination of the form sheet type.

¹⁸
~~26.~~ (Original) An apparatus according to claim ¹⁴~~22,~~

wherein the weight attached to each of said extracted keywords of said input form sheet is given a larger weight as the location of the keyword on the input form sheet approaches closer to the uppermost location.

A1 ²¹
~~27.~~ (Original) An apparatus according to claim ¹⁷~~28,~~

wherein the weights attached to each of said extracted keywords of said input form sheet include a weight based on the type of characters forming the keyword and a weight based on the location of the keyword on said input form sheet.

[Claims 28-32 (Canceled)

²²
~~33.~~ (Currently Amended) A computer program product according to claim ~~32,~~ comprising:

a computer usable medium having computer readable program code means embodied in said medium for determining whether an input form sheet is one of predetermined form sheet types,

said computer readable program code means comprising:

means for registering a plurality of sets of keywords for each of predetermined form sheet types as a set of keywords beforehand in a keyword register;

means for reading image data of said input form sheet, extracting character strings from the read image data, and performing character recognition on each of the extracted character strings; and

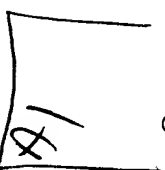
collating means for collating, for each form sheet type, said extracted keywords with said sets of keywords registered in said keyword register, thereby to determine the type of said input form sheet,

wherein in said register means, each keyword in said sets of keywords is registered in association with a predetermined corresponding weight, and

said collating means evaluates, for each form sheet type, the degree of matching between said input form sheet and said predetermined form sheet types by using the weights given to each of said extracted keywords and said predetermined weights of the keywords in each set of said keywords within said keyword register to thereby decide that a form sheet type having a highest degree of matching is the form sheet type of said input form sheet.

Serial No. 09/645,404

ASA-915

 Claims 34-36 (Canceled)
